

Claims

1. A high-pressure pump for a fuel injection system of an internal combustion engine, having a rotationally driven drive shaft (12) that has a shaft portion (26), embodied eccentrically to the axis of rotation (13) of the drive shaft, on which portion a ring (28) is rotatably supported, and having at least one pump element that has a pump piston (34), driven at least indirectly in a reciprocating motion by the drive shaft (12) via the ring (28), which piston rests at least indirectly on the ring (28), characterized in that the ring (28) is provided, at least on its outer face facing away from the shaft portion (26), with a coating (56) of a friction-reducing paint in at least one region (29), in which the at least one pump piston (34) rests at least indirectly on the ring (28).
2. The high-pressure pump according to claim 1, characterized in that the ring (28), on its circumference, has at least one flat face (29), on which the pump piston (34) rests at least indirectly and which is provided with the coating (56) of friction-reducing paint.
3. The high-pressure pump according to claim 1 or 2, characterized in that the ring (28), at least in the region in which the coating (56) of friction-reducing paint is applied, has a nitrocarburized surface layer (58), onto which the coating (56) of friction-reducing paint is applied.
4. The high-pressure pump according to claim 3, characterized in that the nitrocarburized surface layer (58) has a thickness of approximately 5 to 20 µm, preferably approximately 10 µm.

5. The high-pressure pump according to claims 1 through 4, characterized in that the coating (56) of friction-reducing paint has a thickness of approximately 10 to 50 µm, preferably approximately 15 to 30 µm.

6. The high-pressure pump according to one of the foregoing claims, characterized in that the ring (28) comprises an alloy 16MnCrS5.